



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/762,585	01/21/2004	Ronald W. Gilbert	E-1806 (130105.415)	3024
36977	7590	11/04/2005	EXAMINER	
SEED INTELLECTUAL PROPERTY LAW GROUP PLLC 701 FIFTH AVENUE, SUITE 6300 SEATTLE, WA 98104-7092			BANGACHON, WILLIAM L	
			ART UNIT	PAPER NUMBER
			2635	

DATE MAILED: 11/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/762,585

Applicant(s)

GILBERT ET AL.

Examiner

William Bangachon

Art Unit

2635

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 21 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 6/17/05.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

3. Claims 1-10 and 15-20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claims 1-10 and 15-20 is considered a single means claim that recites a RFID transponder that covers every conceivable means for operating in a plurality of modes and for changing modes of operation, as recited in the claims.

A single means claim, i.e., where a means recitation does not appear in combination with another recited element of means, is subject to an undue breadth rejection under 35 U.S.C. 112, first paragraph. In re Hyatt, 708 F.2d 712, 714-715, 218 USPQ 195, 197 (Fed. Cir. 1983) (A single means claim which covered every conceivable means for achieving the stated purpose was held nonenabling for the scope of the claim because the specification disclosed at most only those means known to the inventor.). When claims depend on a recited property, a fact situation comparable to Hyatt is possible, where the claim covers every conceivable structure (means) for achieving the stated property (result) while the specification discloses at most only those known to the inventor.

Art Unit: 2635

4. Claims 1-21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With regards to claims 1-10 and 15-21, it is unclear in the claims and the specification on how the RFID transponder, as claimed, achieves the stated purpose, since it lacks the necessary structural elements to cover every conceivable means of operating in a plurality of modes, and every conceivable means for changing modes of operation.

Claim 11 recites the limitation "the first distance" in page 11, line 5, claims 12-14 recites "different modes of operation". There is insufficient antecedent basis for these limitations in the claims. Further, with regards to claims 12-14, it is unclear what modes of operation the claims are referring to (i.e. between read and write operations or between passive and active operations or both).

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2635

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

### ***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1-21 are rejected under 35 U.S.C. 103(a) as obvious over USP 6,489,883 (Iiyama et al).

In claim 1, Iiyama et al teach of a transponder device shown in figures 1, 2, 7, comprising:

a non-contact IC card (radio frequency identification transponder) configured to operate in a plurality of modes and to change modes of operation in accordance with the strength of a received radio frequency signal {col. 4, lines 10-18, lines 40-52}. Also see figure 3, step 43.

Although Iiyama et al do not disclose expressly a plurality of modes of operation, it would have been obvious to one of ordinary skill in the art that when the transponder of Iiyama et al is away from the interrogation zone, it is operating in a so-called active mode of operation and when it is within the interrogation zone, it is operating in a so-called passive mode of operation.

In claims 2, 7, 9, 12 and 17, each mode of operation is activated and deactivated independent of the other modes of operation in response to the strength of the radio frequency signal {paragraph bridging cols. 3 and 4; Fig. 3, step 43-44 or 45}.

In claims 3 and 18, the transponder is configured to operate in a passive mode when within a first distance from the transceiver, and in an active mode when within a second distance from the transceiver that is closer to the transceiver than the first distance {col. 7, lines 15-47; Fig. 3, steps 44 and 45}.

In claims 4, 10, 13 and 19, the transponder is configured to deactivate all modes that are not operational {Fig. 3, step 44 and 45}.

In claims 5, 14 and 20, the transponder is configured to activate only one mode of operation at a time {col. 6, lines 47-57; col. 8, lines 15+; Fig. 3, either step 44 or 45}. In this case, when the transponder device is out of the interrogation range (first distance), the transponder device is battery operated. And when the transponder device gets closer to the question unit and within the interrogation range of the question unit, battery operation is switched off. At this point, converted energy from the interrogation signal is used to power the transponder device.

Claim 6 recites the combination of claims 1 and 5, and therefore rejected for the same reasons.

Claim 8 recite the combination of claims 1 and 3, and further comprising a third mode when at a third distance which is the combination of the first mode and second mode of operation. Alternatively, the transponder can operate in a battery mode while the transponder is placed in a sleep mode {paragraph bridging cols. 9 and 10}.

Claims 11 and 21 recite the combination of claims 1 and 3. In claim 11, although liyama et al do not show a micro-power oscillator (7), ROM (12) -based circuit, and a CMOS microcontroller (11) to perform generating control signals for controlling external devices, these claim limitations would have been obvious in the non-contact IC card of liyama et al because ROM based circuits and CMOS microcontrollers are conventionally used in IC chip manufacturing, to one of ordinary skill in the art.

Claim 15 recites the transponder of claim 1, further comprising of a question unit (transceiver) shown in figures 5 and 6.

In claim 16, the transceiver is configured to vary the strength of the transmitted radio frequency signal {col. 7, lines 15-28}.

10. Claims 1-7, 15, 17-20 are rejected under 35 U.S.C. 102(b) as anticipated by USP 6,489,883 (Vercellotti et al).

In claims 1, 6, 15, Vercellotti et al teach of a dual mode electronic identification system comprising:

a portal head (transceiver) (2) configured to transmit a radio frequency signal and to receive a response signal {col. 3, lines 28-45}; and

a tag (radio frequency identification transponder) (4) configured to operate in an access mode (passive mode) and beacon mode (active mode) and to change modes of operation in accordance with the strength of a received radio frequency signal {col. 4, lines 25-29, lines 65+}. Also see col. 2, lines 34+.

In claims 2, 7, 12 and 17, each mode of operation is activated and deactivated independent of the other modes of operation in response to the strength of the radio frequency signal {col. 5, lines 46-61}.

In claims 3 and 18, the transponder is configured to operate in a passive mode (access mode) when within a first distance (interrogation range) from the transceiver (2), and in an active mode (beacon mode) when within a second distance (out of the interrogation range) from the transceiver that is closer to the transceiver than the first distance {col. 5, lines 46-61}.



In claims 4 and 19, the transponder is configured to deactivate all modes that are not operational {col. 5, lines 46-61}.

In claims 5 and 20, the transponder is configured to activate only one mode of operation at a time. In this case, when the transponder device is out of the interrogation range (first distance), the transponder device is battery operated. And when the transponder device gets closer to the question unit and within the interrogation range of the question unit, battery operation is switched off. At this point, converted energy from the interrogation signal is used to power the transponder device {col. 5, lines 46-61}.

Claim 6 recites the combination of claims 1 and 5, and therefore rejected for the same reasons.

11. Claims 8-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over USP 6,489,883 (Vercellotti et al).

Claim 8 recite the combination of claims 1 and 3, and further comprising a third mode when at a third distance (not shown). It would have been obvious to one of ordinary skill in the art to recognize to have a third mode when at a third distance in the system of Vercellotti et al, such as the combination of the first mode and second mode of operation. That is, as the distance from the tag and portal head becomes greater and the power transmitted for the portal head diminishes, the tag operates to determine when to switch power supplies {col. 5, lines 46+}.

Claims 9 and 12 recite the limitations of claim 2 and therefore rejected for the same reasons.

Claims 10 and 13 recite the limitations of claim 4 and therefore rejected for the same reasons.

Claims 11 and 21 recite the combination of claims 1 and 3. Claim 11 further comprises of a micro-power oscillator (16), ROM-based circuit (15), and a CMOS microcontroller (14) to perform generating control signals for read operations {col. 4, lines 30-48}.

Claim 14 recites the limitations of claim 5 and therefore rejected for the same reasons.

12. Claims 1-7, 15, 17-20 are rejected under 35 U.S.C. 102(b) as anticipated by GB 2292866 (Miyamoto).

In claims 1, 6, 15, Miyamoto teaches of a non-contact IC card (RFID transponder) comprising:

a reader/writer (transceiver) configured to transmit a radio frequency signal and to receive a response signal {page 14, 2nd paragraph}; and

a card (radio frequency identification transponder) shown in figures 1, 2, 4, configured to operate in a plurality of modes (active, passive, standby, energy saving) and to change modes of operation in accordance with the strength of a received radio frequency signal {page 14, 2<sup>nd</sup> paragraph+; page 16, last paragraph+}.

In claims 2, 7, 9, 12 and 17, each mode of operation is activated and deactivated independent of the other modes of operation in response to the strength of the radio frequency signal {paragraph bridging pages 14 and 15; page 15, 3<sup>rd</sup> paragraph}.

In claims 3 and 18, the transponder is configured to operate in a passive mode (access mode) when within a first distance (interrogation range) from the transceiver (2), and in an active mode (beacon mode) when within a second distance (out of the interrogation range) from the transceiver that is closer to the transceiver than the first distance {paragraph bridging cols. 14 and 15}.

In claims 4, 10 and 19, the transponder is configured to deactivate all modes that are not operational {page 15, 3<sup>rd</sup> paragraph}.

In claims 5 and 20, the transponder is configured to activate only one mode of operation at a time. In this case, when the transponder device is out of the interrogation range (first distance), the transponder device is battery operated. And when the transponder device gets closer to the question unit and within the interrogation range of the question unit, battery operation is switched off. At this point, converted energy from the interrogation signal is used to power the transponder device {page 15, 3<sup>rd</sup> paragraph; page 15, last paragraph}.

Claim 6 recites the combination of claims 1 and 5, and therefore rejected for the same reasons.

Claim 8 recites the limitations of claim 1. further comprising a third mode at a third distance. In this case, Miyamoto teaches of standby state at a third distance {page 18, last paragraph}.

### ***Conclusion***

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

USP 6,642,647 (Roz), USP 6,236,333 (King) and USP 6,011,320 (Miyamoto et al) are cited in that these patents teach of operating tags and/or transponders in both active and passive modes of operation. See whole document.

### ***Office Contact Information***

14. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to William Bangachon whose telephone number is **(571)-272-3065**. The Examiner can normally be reached on 4/4/10.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Michael Horabik can be reached on **(571)-272-3068**. The fax phone numbers for the organization where this application or proceeding is assigned is **571-273-8300** for regular and After Final formal communications. The Examiner's fax number is **(571)-273-3065** for informal communications.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

Art Unit: 2635

you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at **866-217-9197** (toll-free).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4700.



William L. Bangachon  
Examiner  
Art Unit 2635

October 28, 2005

MICHAEL HORABIK  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600

